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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,388	03/27/2001	Frank Sauer	2001P05445US	1674

7590 05/10/2006

Siemens Corporation
Intellectual Property Department
186 Wood Avenue South
Iselin, NJ 08830

EXAMINER

HARRISON, CHANTE E

ART UNIT	PAPER NUMBER
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2628

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/818,388

Applicant(s)

SAUER ET AL.

Examiner

Chante Harrison

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16, 18-25 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6, 8, 11, 13, 14, 18, 20, 23 and 25 is/are rejected.
- 7) ☒ Claim(s) 3-5, 7, 9, 10, 12, 15, 16, 19, 21, 22, 24 and 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: RCE, filed on 12/22/05.
2. Claims 1-16, 18-25 and 28 are pending in the case. Claims 1, 13 and 25 are independent claims and have been amended. Claims 17, 26 and 27 are cancelled.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 2, 6, 8, 11, 13, 14, 18, 20, 23 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Thomas Kienzle, US 2005/0119561 A1, 6/2005.

As per independent claim 1, Kienzle discloses displaying a real view of an environment including an instrument (i.e. x-ray images of lateral views of a femur that include guide pin, e.g. instrument, images) (Fig. 1 & 3; pp. 3, Para 31); determining a preferred path for positioning of said instrument (i.e. determining an insertion position, represented by virtual trajectories, that accommodate a desired pattern) (pp. 3, Para 32); marking the preferred path with a graphics guide (Fig. 4 "131"; Fig. 11 "211"); augmenting the real view with a rendering of the graphics guide such that at least one portion of the graphics guide is transparent with respect to other portions of the graphics guide to provide a substantially unobstructed view through the at least one portion of the graphics guide to

at least a portion of the instrument to facilitate alignment of the real instrument with the virtual guide (i.e. guide marking "211" are shown with the instrument "130" overlaid on the markings while the markings remain visible) (pp. 3, Para 33; Fig. 12 "211"); aligning the instrument with the graphics guides so that the instrument appears in a same location as the graphics guide in the augmented view thereby creating a mutual spatial relationship between the real instrument and the virtual guide, and when properly aligned, at least a portion of the instrument is visible through the at least one transparent portion of the graphics guide (i.e. guide markings "211" are shown with the instrument "130" overlaid on the markings while the markings remain visible) (pp. 3, Para 33; Fig. 12 "211"); and inserting the instrument in the graphics guide (i.e. "Once the drill guide is in proper position, as evidenced by proper alignment of the drill guide trajectory... the surgeon inserts the guide pin) (pp. 6, Para 57). It is inherent that Kienzle teaches transparently displaying a graphics guide in a mutual spatial relationship with a real view of an instrument as he discloses providing an improved augmented view of a graphic representation of a drill guide that can be visually acknowledged as being in proper alignment with virtual trajectory/guide markings.

As per dependent claims 2 and 14, Kienzle discloses said rendering includes a modulation of the graphics guides transparency along the length of the graphics guide, sot that a plurality of portions of the graphics guide appear transparent with respect to other portions of the graphics guide along the length of the graphic guide to provide a substantially unobstructed view through the plurality of transparent portions of the

graphics guide to a plurality of portions of the instrument once the instrument has been correctly aligned with the graphics guide (i.e. successively placed guide markings "211" are shown with the instrument "130" overlaid on the markings, while the markings remain visible) (pp. 3, Para 33; Fig. 12 "211"; pp. 5, Para 57).

As per dependent claims 6 and 18, Kienzle discloses said rendering step comprises the step of varying the transparency of the at least one portion of the graphics guide such that the at least one portion repeatedly switches between transparent and less transparent (i.e. successively placed guide markings "211" each have an opaque bounding region that encloses an inner transparent region, such that the transparency of the marking changes from less transparent to more transparent as the guide is viewed from one end boundary line through the inner region of the marking to the other end boundary line, which enables showing the instrument "130" overlaid on the markings, while the markings remain visible) (pp. 3, Para 33; Fig. 12 "211").

As per dependent claims 8 and 20, Kienzle discloses said determining step comprises the step of constructing the graphics guides as a line (Fig. 4 "131"; Fig. 12 "211"; pp. 6, Para 60 "a straight or curved path"), and said rendering step comprises the step of modulating the transparency of portions of the line so that at least a portion of the instrument is substantially unobstructed when viewed through the portions of the line (i.e. successively placed guide markings "211" each have an opaque bounding region that encloses an inner transparent region, such that the transparency of the marking changes from less transparent to more transparent as the guide is viewed from one end

boundary line through the inner region of the marking to the other end boundary line, which enables showing the instrument "130" overlaid on the markings, while the markings remain visible) (pp. 3, Para 33; Fig. 12 "211"; pp. 6, Para 57).

As per dependent claims 11 and 23, Kienzle discloses constructing the graphics guide as a cylinder (Para 60 "a straight or curved path") and said rendering step comprises the step of modulating the transparency of portions of the cylinder so that at least a portion of the instrument is substantially unobstructed when viewed through the portions of the cylinder (i.e. successively placed guide markings "211" each have an opaque bounding region that encloses an inner transparent region, such that the transparency of the marking changes from less transparent to more transparent as the guide is viewed from one end boundary line through the inner region of the marking to the other end boundary line, which enables showing the instrument "130" overlaid on the markings, while the markings remain visible) (pp. 3, Para 33; Fig. 12 "211"; pp. 6, Para 57).

As per independent claim 13, Kienzle discloses an apparatus (pp. 3, Para 32) for implementing the method of claim 1.

As per independent claim 25, the rationale as applied in the rejection of claim 1 applies herein.

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2. Claims 3-5, 7, 9-10, 12, 15-16, 19, 21-22, 24 and 28 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

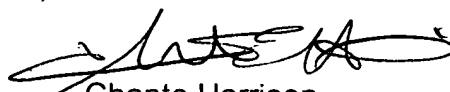
3. Applicant's arguments with respect to claims 1-16, 18-25 and 28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chante Harrison whose telephone number is 571-272-7659. The examiner can normally be reached on Monday, Tuesday and Wednesday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chante Harrison
Examiner
Art Unit 2628

Ch
May 8, 2006